

Simplify an explicit formula for z_n is given
by $z_n = 2\left(-\frac{1}{3}\right)^{n-1}$

EXCEL OR SPREADSHEETS FOR LIST OF VALUES
USE GEOGebra TO VISUALIZE VALUES

Limit is ϕ

Simplify explicit formula for z_n is
given by $z_n = n^{1/n}$

Ex 3] $z_n = n^{1/n} = \{n^{1/1}, n^{1/2}, n^{1/3}, n^{1/4}, \dots\}$

Guessed $n^{1/n} \rightarrow \text{CORRECT!}$

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"We say the sequence $\{z_n\}$ is convergent
if for some value L (finite)

z_n becomes arbitrarily close to L as
 n becomes sufficiently larger"

Convergence

"We say L is the limit of the
sequence and write"

$$\lim_{n \rightarrow \infty} z_n = L$$

or

$$z_n \rightarrow L$$

If not convergent, $\{z_n\}$ is divergent